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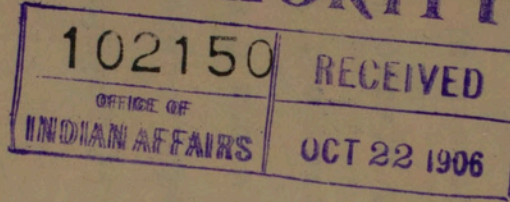
OFFICE OF
Indian Affairs
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AUTHORITY



Indian School, Carlisle, Pa.,
Oct. 11, 1906.

Maj. W. A. Mercer,
Supt.

Forwards catalogue descriptive
of revolving screen for stone
crusher.

1 inclosure.

To Secy. Oct. 19/1906
" Supt. Oct. 26/1906

7

Schooley

DEPARTMENT OF THE INTERIOR,

INDIAN INDUSTRIAL SCHOOL,

OFFICE OF SUPERINTENDENT.

CARLISLE, PA

Oct. 11, 1906. *J.R.W.*

The Honorable,

The Commissioner of Indian Affairs,

Washington, D. C.

Sir:

Replying to your Office letter (Finance 86244/1906) dated the 10th instant, there is inclosed herewith an illustrated catalogue, on pages 5 and 9 of which will be found illustrations and descriptions of the revolving screen desired for the stone crusher. In order to obtain fine crushed stone for macadamizing and for concrete work it is deemed very necessary that we have such a screen. A screen with four sizes of perforations is desired.

Very respectfully,

W. A. Mercer
Major 11th Cavalry,
Superintendent.

AES

INDIAN DIVISION
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OFFICE OF INDIAN AFFAIRS	OCT 22 1906

W. F. SHOEMAKER,
Sales Agent,
Hummelstown, Pa.

CLIMAX



1906

MARATHON
N.Y.

1906

Annual Illustrated Catalogue

of

Crushing & Road Machinery

Manufactured by

Climax Road Machine Co

Marathon, Cortland Co., N. Y.

Stone and Ore Crushers
Portable and Stationary Crushing Plants
Reversible Road Machines
Reversible Horse Road Rollers
Dirt Moving Tools of all Kinds

A Bridge Manufacturing and Erecting Dept
Rotary Crushers of Best Type
Sprinkling and Other Municipal Wagons

PARTIAL LIST OF BRANCH HOUSES

It is sometimes more convenient in matters of inquiry to address the agent or branch office nearest to you. For that reason we append a list of such agencies as are able at all times to give your communications immediate attention.

1019 Westinghouse Bldg., Pittsburg, Pa.	Albany, N. Y. Geo. K. Smith, Mgr.
21 South Market St., Boston, Mass.	Nashville, Tennessee.
P. O. Box 675, Harrisburg, Pa.	Reierson Machinery Co., Portland, Oregon.
G. H. Marsh, Agent, Warren, Pa.	

Canadian Branch; 64 King Street East, Hamilton, Ont., John Robinson, Mgr.

The Word "CLIMAX" is Registered by us as Applied to Road and Crushing Machinery



A Foreword About the Climax Machine

FOR a score of years we have been building Climax products; for the same length of time the machines have been giving the greatest degree of satisfaction. It is because of this satisfaction, that the machines have grown in popularity until to-day, they are the accepted standard of excellence in their line.

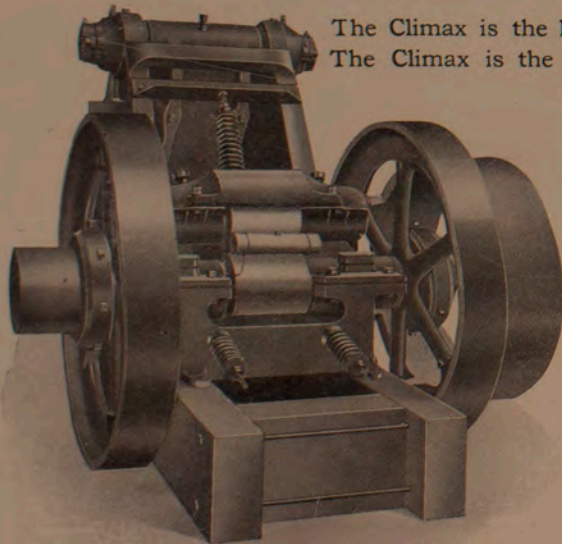
The durability, efficiency, and stability of Climax Machinery is due to the fact that the highest type of engineering skill and thorough knowledge of what such machinery must accomplish, are combined in Climax construction with the best grade of materials and real character in workmanship.

Every device and every facility that could tend to add to construction value or continued efficiency, has been incorporated in the equipment of the modern plant where Climax machinery is built; skilled workmen in every branch second the thoroughness of the mechanical work; nothing here is based on what others have done, or what other methods might cost; everything is subservient to the one great idea that Climax stands for the "height of perfection" and that the machinery must be as good as its name.

Hence, we bid for your patronage and orders on the broad basis of the character of our products; Climax Machinery will stand every test, and comparison inevitably results in choosing the Climax line.

CLIMAX ROAD MACHINE CO., MARATHON, N. Y.

What We Claim as Special Features - The Proof Follows



The Climax is the largest portable Crusher on the market.
The Climax is the lightest weight Crusher, despite great capacity.

The Climax is the easiest to set up, easiest to move.

Having a single eccentric shaft, it requires less power than others.

It has a solid steel frame and folding steel elevator.

Its durability has been amply proven in the past 20 years of use.

Every part made to template, hence less delay if breaks occur.

Easiest to operate, set up, take down or move, yet most powerful.

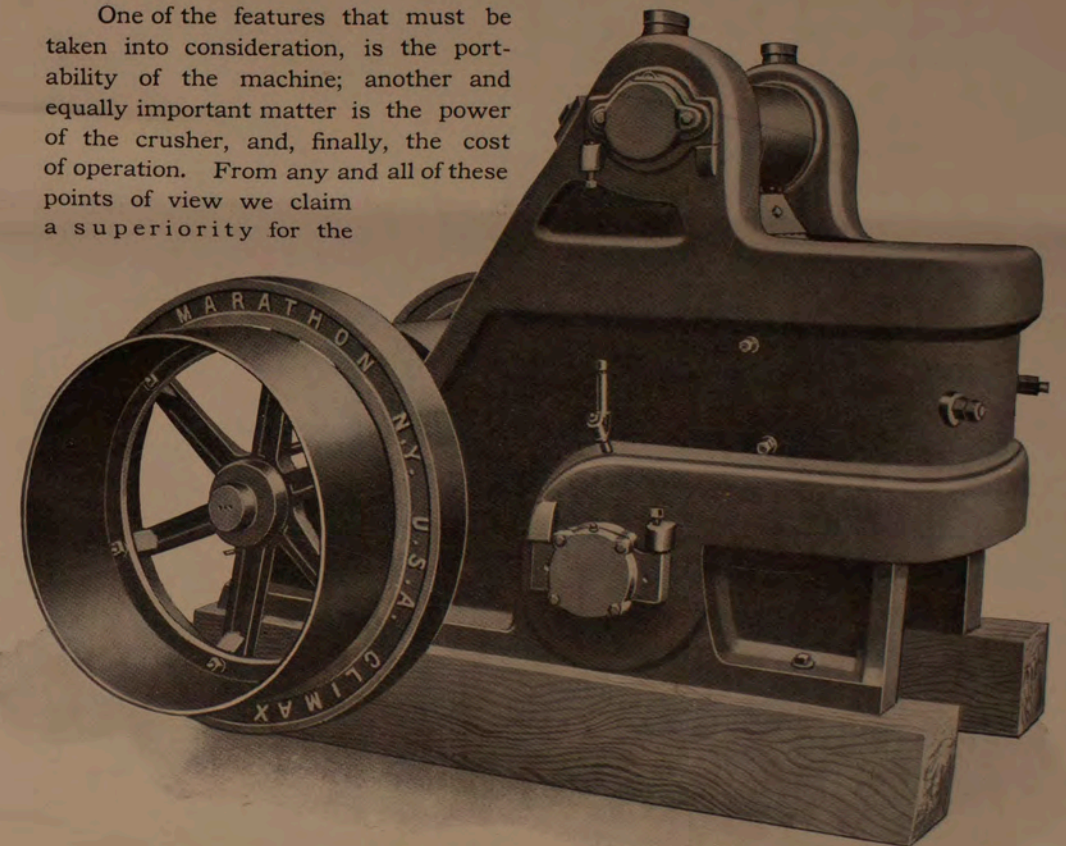
Fewest parts; fewer to wear; fewer to break down.



Crusher Work - - And how the Climax Handles it.

Little needs to be written about the usefulness of Crushing Machinery—its place in Road Making and other branches of work is too well fixed to make argument necessary. What the purchaser—whether an individual or a municipality—needs to know is, which is the best type of Crusher and why is it the best.

One of the features that must be taken into consideration, is the portability of the machine; another and equally important matter is the power of the crusher, and, finally, the cost of operation. From any and all of these points of view we claim a superiority for the



Climax machine. This claim is not based on our say-so, but because of its record the country over.

The gyratory type of Crusher was inconvenient, complicated and costly in operation; the jaw crushers of early construction were not powerful enough for many branches of work; hence, the advent of the Climax—a jaw crusher that is portable, powerful and operated with the minimum of power.

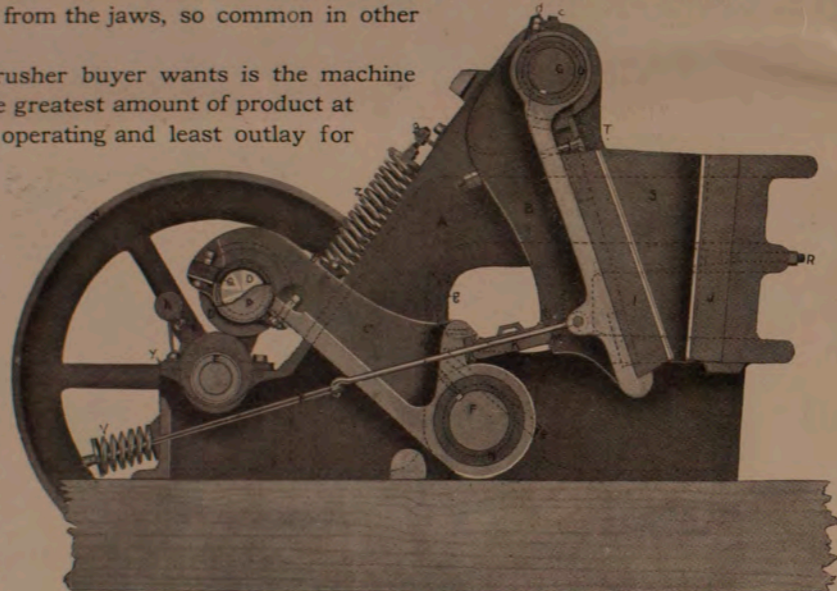
In Climax Crushers the stone is broken by the operation of a movable jaw against a stationary jaw, the movement being actuated by the lever and thus communicated to the movable jaw. A single eccentric shaft is used, thus minimizing the power necessary; as the frame of the Climax machine is a solid



casting, the certainty of accurate alignment is assured. The machine is so designed that there is no wear on any main part and in every wearing surface there is a replaceable bushing or boxing. This class of construction is practically "life insurance" for the Climax, giving to it a durability, which, accompanied by good care, renders its longevity a big factor.

All wearing parts are made to template, so that in case of accident, you may be certain of perfect fit when you order parts from us. A point worth notice in the crushing action of the Climax is, that the movable jaw is hung well forward so that the crushing begins the moment the stone enters the machine and there is no tendency to an upward motion, and the consequent throwing out of the stone from the jaws, so common in other machines.

What the crusher buyer wants is the machine that will give the greatest amount of product at the least cost for operating and least outlay for repairs. The record of the Climax proves its occupancy of this field. First determine whether a portable or stationary crusher is most advisable for the work to be done; next decide what attachments are needed in the way of bins and elevator; finally, select the size of crusher best adapted to the work. The rated product of Climax Crushers, shown on another page, is not a matter of guess work, but is compiled from actual tests and can be substantiated by any Climax Crusher now in service.



Index to Sectional View

- | | |
|---|--|
| <p>A Main frame, solid casting.
 B Movable jaw, openhearth steel casting.
 C Lever, openhearth steel casting.
 D Roll, forged steel.
 E Eccentric shaft, forged steel.
 F Lower fulcrum shaft, turned and polished steel.
 G Upper fulcrum shaft, turned and polished steel.
 I Movable crushing plate.
 J Stationary crushing plate.
 K Adjusting plate with chilled edges.
 L Chrome steel bushing for seat of adjusting plate in lever.
 M Chrome steel bushing for seat of adjusting plate in jaw.
 N Lower fulcrum shaft bushing.
 O Upper fulcrum shaft bushing.
 P Roller oil box, making dust proof cover for roller journals. The bottom is packed with felt to insure lubrication.
 Q Roller bushing, best babbitt metal. Runs cool and readily replaced.
 R Crushing plate bolt of wrought iron. Holds stationary plate firmly in place.</p> | <p>S Check plate, steel.
 T Crushing plate wedge; holds movable crushing plate firmly.
 V Spring for holding jaw against adjusting plate.
 W Balance wheel.
 X Rod attached to jaw and passing through rear of frame. This rod in connection with spring V draws jaw back.
 Y Eccentric cap.
 Z Spring for holding roll against eccentric shaft.
 a Angle for holding spring, Z.
 b Plate on lever for holding spring, Z.
 c Pipe plug for upper fulcrum oiler.
 d Wedge bolt, used as key to prevent upper shaft turning in jaw.
 e Wedge bolt, used as key to prevent lower shaft turning in lever.
 f Bolt for holding wedge plate, T.
 g Lower fulcrum oiler.
 h Oil reservoir for oiling eccentric cam.
 i Pet cock for oiling eccentric cam.</p> |
|---|--|



The Make-up of the Climax.

From the ground up the Climax Crusher is made to last. Knowing the racket which such machinery must be expected to withstand and being fully acquainted with the elements of strength necessary to success, we have labored to construct a machine that would give a good account of itself in the performance of its work. Judged by this standard, the Climax has always "made good."

The choosing and using of only first grade materials is backed by accurate machine work, so that no question can arise as to the durability of Climax Crushers. The solid frame construction is guaranteed against breakage, the tensile strength of the cast iron machines being upwards of 30,000 pounds per square inch, while that of the open hearth steel frame machines is upwards of 60,000 pounds per square inch.

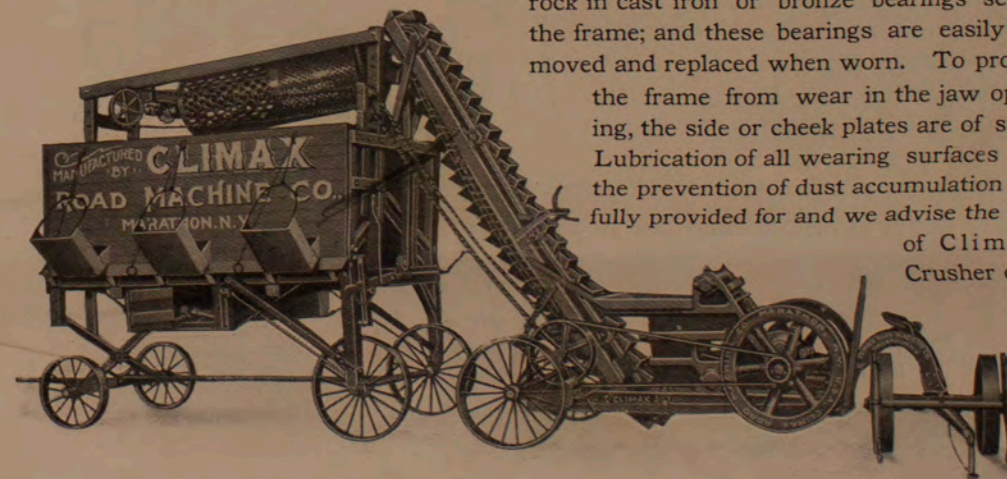
All working parts in all our Crushers are open hearth steel castings; the eccentrics and rolls are high carbon forgings, accurately machined, and only the best quality of shafting is employed. The adjusting plates or toggles are grey iron castings with chilled edges, set in chrome steel seats in the lever and movable jaw; these adjusting plates regulate the size of the product; the larger plates cause the jaws to set closer together and hence, produce a finer product. A full set for the making of every size product accompanies each crusher and the change from one plate to another is readily made through the opening in the side of the frame.

Bearings

The hardest genuine babbitt bearings are used for the anti-friction roll and the eccentric shaft in the lever and frame; the upper and lower fulcrum shafts rock in cast iron or bronze bearings set in the frame; and these bearings are easily removed and replaced when worn. To protect

the frame from wear in the jaw opening, the side or cheek plates are of steel. Lubrication of all wearing surfaces and the prevention of dust accumulation are fully provided for and we advise the use

of Climax
Crusher oil



Complete Portable Crushing Plant Mounted.

and grease which is specially designed for this purpose.

*1/2" } size perforations suggest
 1" }
 2" } Mr. Shumaker*

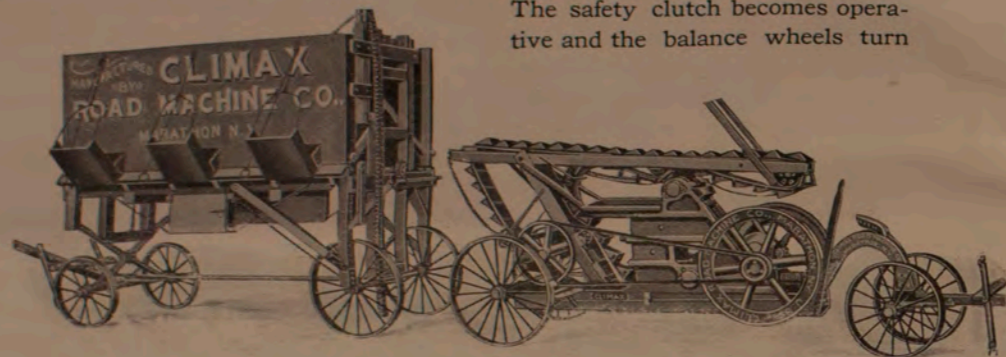
See P. 9.



Safety Device

A safety device is absolutely essential in crusher work, so that no damage can result should some foreign substance, of too great resistance, drop into the jaws of the crusher. The Climax is provided with a safety friction clutch, which holds the balance wheels to the eccentric or power shaft by frictional contact only.

The safety clutch becomes operative and the balance wheels turn



Complete Plant With Elevator and Screen Lowered, Ready to Move.

on the eccentric shaft independent of the working parts of the Crusher.

Frames

The frames of Climax portable crushers are steel castings and those of the stationary crushers are cast iron. The same strength is secured in the steel frame as in the heavier cast iron frame and light weight is a factor in portable machinery. Where the machine is not to be moved from place to place, the cast iron is better because it insures rigidity and its weight absorbs the vibration produced by the operating. The frames of both the steel and cast iron crushers are solid castings, not a number of pieces bolted or fastened together. The machine work on the frames is of highest grade, insuring absolute accuracy.

Steel Working Parts

The working parts in all our single lever crushers are open hearth steel castings and absolutely unbreakable. A glance at the sectional view of the Crusher, will prove that our construction possesses greatest power. You will notice that the adjusting plate (K) engages the jaw at a point producing the greatest possible leverage and that it travels straight in line of motion of the jaw and lever. In nearly all other crushers, the strain is diagonally across the corresponding part with a consequent loss of power.

Mountings

We offer two styles of mountings for our crushers, the semi-portable which can be used with all sizes, and the full portable, which can be used with all but machines Nos. 3 and 4.



Semi Portable Mounting

The semi-portable mounting consists of a two wheel truck with a coupler which is attached to the front end of the machine and the balance wheels of the crusher serve as the rear wheels of the truck. When a machine with this mounting is set for operation it is placed on foundation timbers in the manner shown on pages 3 and 8. The attachment and removal of the truck and the mounting and dismounting of the crusher to and from the foundation timbers is quickly and easily accomplished.

Four Wheel Mounting

The four wheel truck or full portable mounting is used with the No. 1½, 2 and 2½ crushers. The steel beams on which the crusher rests underhang the axle leaving the machine low to the ground. To the forward end of the beams is riveted the gooseneck made of heavy steel bars. These bars are again riveted to the front gear casting in which the pole engages.

In setting the crusher for operation the forward gear can be turned under the gooseneck--it is not necessary to remove it. In moving the machinery the gooseneck mounting enables you to turn very short corners. A powerful hand brake which acts on the rear wheels is fitted to the mounting. We make all mounting wheels in our own factory and absolutely guarantee them to give satisfaction in the work for which they are designed; steel rims, staggered spokes, cast hub, accurately machined and thoroughly durable.

The Climax Mounting possesses great advantages over the style of mounting used by some manufacturers designed so that the crusher rests on the rear axle and a gooseneck is attached to the machine. Our mounting keeps the machine just as low to the ground by reason of having the beams underhang the axle, and the weight of the load is distributed over a greater surface, a decided advantage in hauling the machine over rough country roads and light bridges. The four wheel mounting idea for crushers originated with us and the Climax is the most practical of all mounted machines.

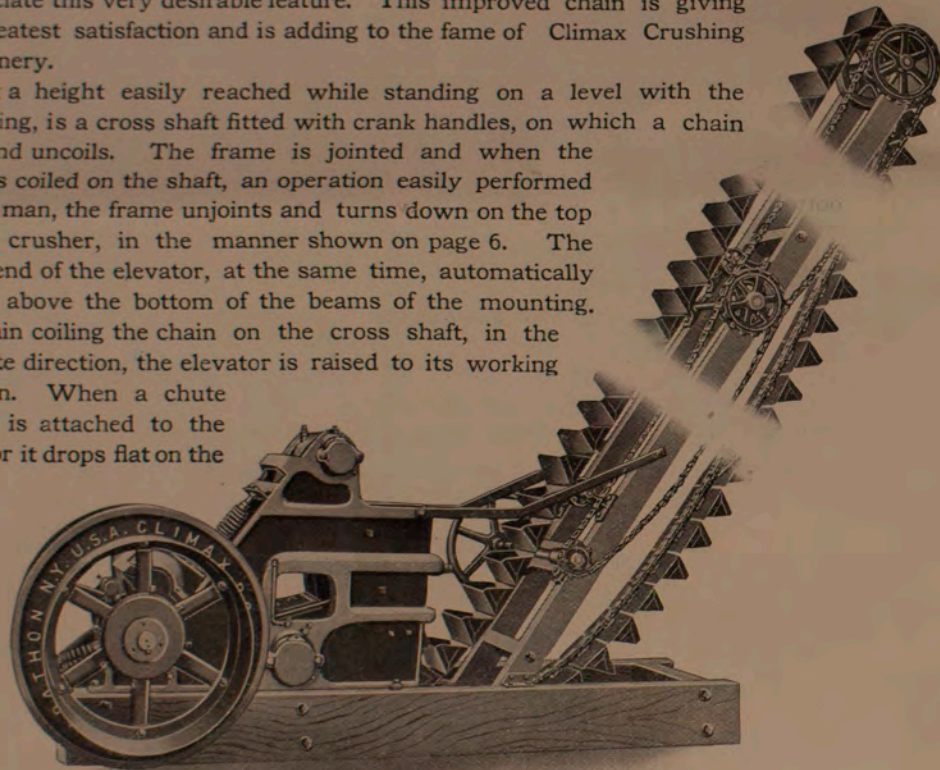
Elevators

Here we illustrate the most vital attachment in connection with Crushing Machinery. There has not been so much trouble with the average Crushers as with elevators of crude design which accompany them. Time and money have been lost and great dissatisfaction created by elevators of impractical design. Climax Elevators are built in a practical way and with a thorough knowledge of what is required of them. First, let us outline a few facts regarding our Folding Elevator originally designed for use with a Portable Machine and which, beyond doubt, is the only elevator of its kind that will give satisfaction when attached to a Portable Crusher. The attachment to the mounting is so arranged that it is unnecessary to excavate when the elevator is set for operation, and one of our mounted crushers, with the folding elevator, can be set up on a pavement and operated. The Folding Elevator is built in all lengths up to and including twenty-four feet centers. Up to sixteen feet centers it is constructed with either a wood or steel frame. The buckets are attached to either rubber or chain belting.



A valuable improvement has recently been added to our elevator by the invention of a steel link chain for the buckets. This chain is constructed on the link belting plan; the links being very short, the belt possesses much more flexibility and consequently a better contact with the driving pulley is secured. The buckets on this chain run more evenly than on the old style malleable chain. Those familiar with different types of elevators will readily understand and appreciate this very desirable feature. This improved chain is giving the greatest satisfaction and is adding to the fame of Climax Crushing Machinery.

At a height easily reached while standing on a level with the mounting, is a cross shaft fitted with crank handles, on which a chain coils and uncoils. The frame is jointed and when the chain is coiled on the shaft, an operation easily performed by one man, the frame unjoins and turns down on the top of the crusher, in the manner shown on page 6. The lower end of the elevator, at the same time, automatically raises above the bottom of the beams of the mounting. By again coiling the chain on the cross shaft, in the opposite direction, the elevator is raised to its working position. When a chute screen is attached to the elevator it drops flat on the



No. 2 Crusher showing double Chain drive on Elevator. elevator when folded and is again thrown in position when raised.

Stationary Elevators are made in all sizes and lengths up to sixty feet centers. Our Standard Elevator is made with the buckets attached to rubber or link belting. The buckets are made of heavy sheet steel, are manufactured with great care and are well riveted. All boxes in which the sprocket or idler shafts run are well babbitted and perfect lubrication of the same is provided for. Our elevators are driven by sprocket chain. The power for driving the elevator is transmitted from the pulley on the crusher by rubber belting, which is far more desirable than a chain drive.

Climax Elevators are built in three sizes, the number two being adapted to use with a number one and one-half and number two crushers, the number two and one-half with a number two and one-half crusher and the number three with the number three and four crushers. We are prepared to furnish elevators of



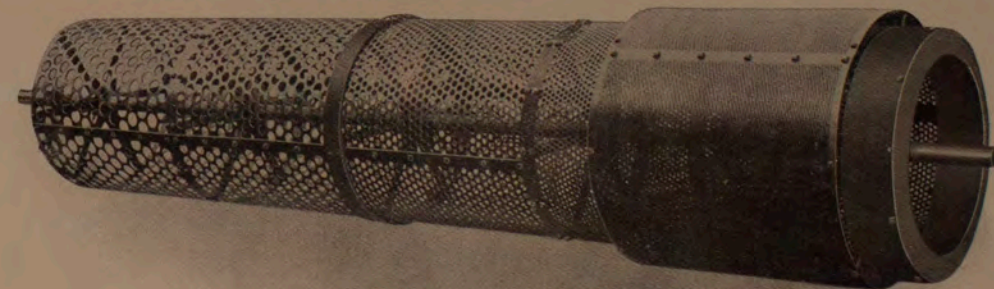
special size and design for any particular work, among these, being those for elevating coal, elevators to be set at and driven at right angles to the crusher and those which are to be located in a narrow space. All elevators are supplied with a takeup for keeping them taut and the buckets are of sufficient size to carry the maximum amount of product for which they are rated. Our elevator is set at an angle which requires less strength to secure the same elevation of the product than any other elevator on the market.

Screens

A Screen for grading the stone is an important part of a crushing plant. Where a short elevator is used of only sufficient length to discharge the product into a wagon box, a chute screen is practical. The chute screen is four feet long and is furnished with any desired size of perforations. It is fitted with a tight bottom plate, which, when used, delivers the entire product of the crusher over the screen without grading it. The bottom plate can be easily removed and that part of the product screened out which will pass through the perforations.

Revolving Screen

The Climax Revolving Screen shown here, is built in all sizes and to furnish any desired number and grades of product. It is made from heavy perforated plates fastened by arms to a shaft passing through the center. As all

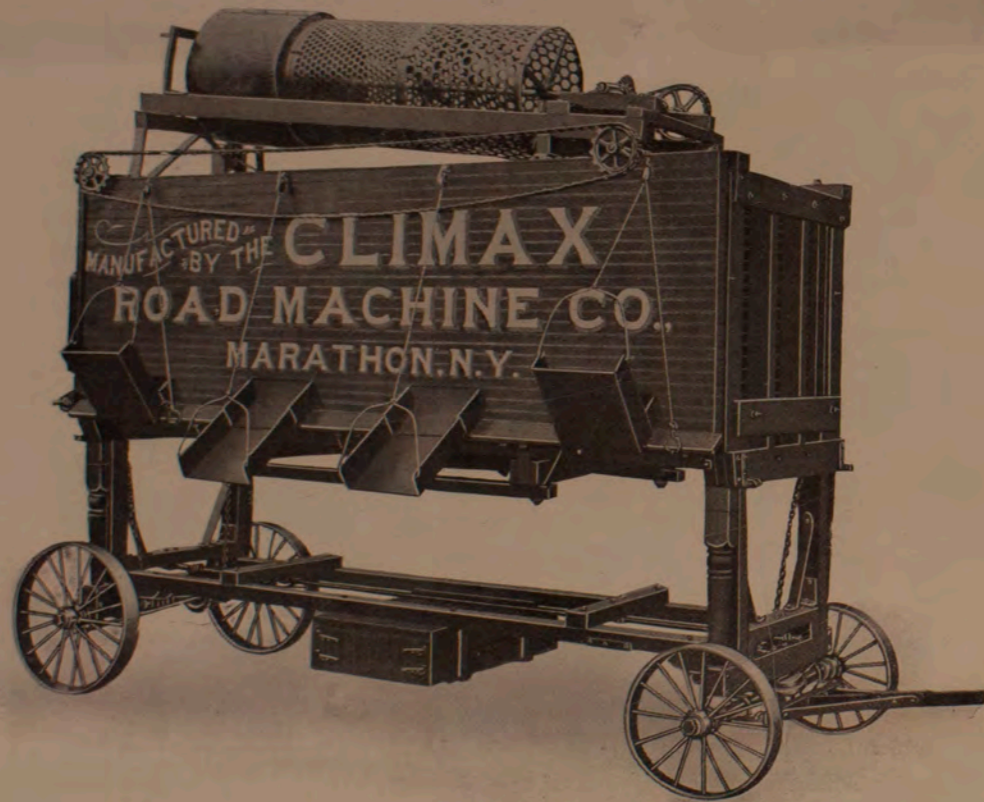


screens are made of large diameter these arms in no way interfere with the proper screening of the product. The revolving screen is driven at a speed of about 15 revolutions per minute by a bevel gear and pinion attached to the screen shaft and a counter-shaft set at a proper distance to avoid the clogging of these gears with stone and dirt. The standard sizes in which our rotary screens are manufactured are, 30, 36 and 42 inches in diameter, 7, 9 and 12 feet long. In these sizes they are made with two, three and four sections with such sizes of perforations as may be specified. As the size of screened product required for different purposes is so variable there is not any standard as regards the perforations in a revolving screen although for screening stone for general purposes we recommend 1 1/4 inch and 2 1/2 inch perforations in a two section screen and 1/2 inch, 1 1/4 inch and 2 1/2 inch perforations in a three section screen. We are prepared to

See p. 5



furnish screens with any size of perforations on short notice. On some screens a dust jacket is required to remove and separate all the sand and dust from the product. This jacket or section with very fine perforations is placed around the first section of the screen and with the use of same a perfectly clean sand or dust is obtained. Every part of the Climax Screen is made to template, all boxes are well babbitted and ample lubrication provided for. The 30 inch diameter screen is best suited for use with the number one, one and one-half and two crushers, the 36 inch diameter with the number three and four crushers, and the 42 inch diameter where the product of more than one crusher is put through one screen or for special purposes. Screens of the diameter above noted will give absolute separation of the product of the machine mentioned.



Large Size Climax Portable Bin and Screen.

Storage Bins

Climax Storage Bins are so satisfactory that they have served as models for other manufacturers to imitate. Our portable bin, on wheels, is a very necessary adjunct to a complete portable plant. A bin effects a great saving in handling the crusher product, and supplies a storage for the different grades of screened stone. The portable bin on wheels is well designed, and is built of



selected pine lumber, insuring lightness and strength. It has three or four compartments, the bottom is lined with steel and both sides are fitted with Climax loading chutes, making it possible to load wagons from either or both sides at the same time. The revolving screen, with which the bin is equipped, may be lowered when moving the bin thereby avoiding topheaviness.



View Showing Screen Lowered into Bin.

Our regular bin, on wheels, of the design shown on pages 10 and 11 has a receiving capacity of fifteen tons. We are prepared to furnish, on special orders, such bins of larger capacity, with a lowering device for the storage box and adapted to the use of a screen of any length.

The portable bin on skids is furnished in a variety of sizes and, in fact, can be furnished to suit any location and special conditions. Such bins are well designed and made, are bolted together and can easily be taken down and moved. All bins are furnished either single or double delivery, as desired. No crushing plant is complete without a practical bin.

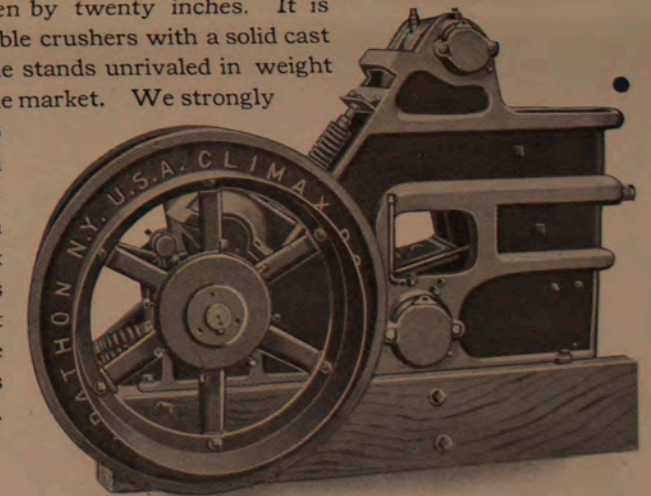
A tailings return chute or return conveyor is furnished, when desired, to return the stone from the end of the screen to the crusher.

Crushing Plates

The Crusher purchaser should look carefully into the matter of crushing plates or dies for his machine. Climax crushing plates are most durable. The face is chilled and the iron used is a special grade, with which is mixed a percentage of steel, making a strong, durable plate, capable of withstanding the wear in any kind of stone. We furnish plates with corrugations to suit the purchaser. In a very hard stone, we recommend the use of narrow corrugations, while in lime stone and similar material, the wide corrugations give more satisfactory results.

Our New Crusher

The Climax Crusher, number 2½ supplies the demand for a portable crusher with a capacity of 140 to 175 yards daily. This machine, as shown by the table which follows, has a jaw opening ten by twenty inches. It is built as are our other sizes of portable crushers with a solid cast steel frame and this No. 2½ machine stands unrivaled in weight and capacity by any machine on the market. We strongly commend the use of this size to contractors whose work requires a portable crusher with a large capacity and to towns which perform a great amount of macadam work yearly. The great call for this machine during the short time it has been on the market is ample evidence of its popularity and its adaptability to these lines of work.





Climax Automatic Distributing Wagon

The wagon, illustrated on this page is an indispensable auxiliary in the construction of stone roads, or in grading. By means of the wagon the material can be evenly distributed on the road, to any desired thickness, in a manner much more satisfactory and far cheaper than done by hand. In addition to its use in this way for spreading, the wagon fills the place of any ordinary dumping wagon which discharges the load in one place.

The driver does not have to leave his seat or stop his team in operating the Climax Wagon. It is simple in construction and only the best material is used in it. The wheels are made of the best second growth oak spokes, black birch hub and heavy bent rims with 9-16 inch tires, 3 1/2 inches wide. The rear wheels overlap the front, thus acting



as a roller, and making it possible to use the wagon on an unfinished road without damaging the road.

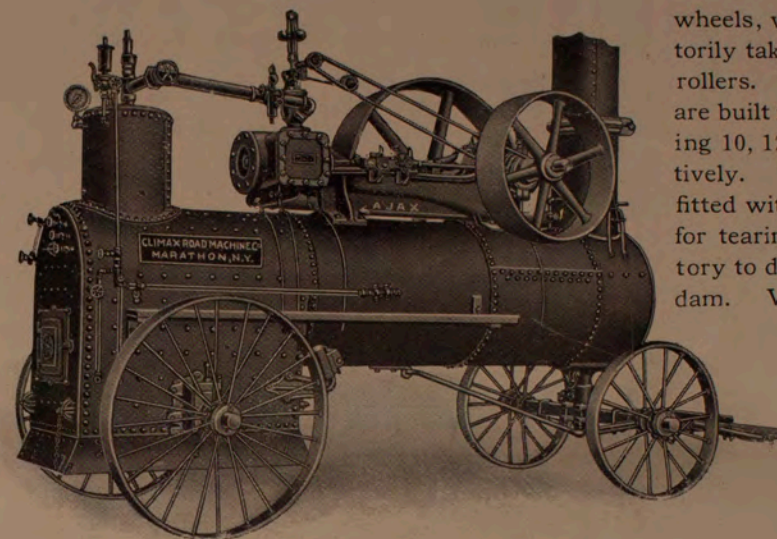
The front wheels are pivoted forward so that the wheels may run over an obstruction twelve inches high without turning the box out of level. The wheels can be cramped in under the seat and the wagon turned in a very short space. The pole is supported by a spring, taking all weight off the horse's necks.

Engines

On page 13 is shown our portable locomotive boiler and Engine mounted on wheels. This type is the most convenient as well as the most durable general-purpose power for operating a stone crusher or other machinery. We furnish mounted engines and boilers in all sizes up to and including 50 horse power. The most careful attention is given to every detail of manufacture of our engines, especially to the material and workmanship of the boiler, on which so much depends. We are prepared to supply semi-portable and stationary power plants of any capacity. To those preferring a gasoline engine for power, we offer such a machine, of either the portable or stationary type. Our engines are fully guaranteed in all respects and the prospective purchaser will do well to confer with us before buying.

Traction Engines and Traction Engine Rollers

For many kinds of work a traction engine is preferable to any ordinary portable rig. We supply such outfits as well as traction engines with roller



wheels, which very satisfactorily take the place of steam rollers. The traction rollers are built in three sizes, weighing 10, 12 and 13 tons respectively. The rear wheels are fitted with removable spikes for tearing up a road preparatory to dressing it with macadam. Write for complete catalogue and description of these goods.

Culvert Pipe

Our bridge business is constantly increasing and we have a big call for

sluice pipe. In some places vitrified clay pipe is most suitable and where the service required of the pipe is more severe, riveted steel or cast iron pipe is necessary. We are in a position to make the most favorable quotations on all these goods. Vitrified pipe is furnished in lengths of two feet of any required diameter. Riveted steel pipe is furnished in any diameter and length, while cast iron pipe of any diameter is furnished in twelve foot lengths. The appended table shows the weight per foot and length of cast iron pipe.

Inside Diam. of Pipe, in Inches	Thickness	Weight per		Inside Diam. of Pipe, in Inches	Thickness	Weight per	
		Foot	Length			Foot	Length
3	.38	13.9	167	18	.63	127.7	1532
4	.40	19.2	230	20	.66	149.	1788
5	.42	24.6	295	24	.75	200.6	2407
6	.43	30.4	364	30	.87	290.2	3482
8	.47	42.8	513	36	.98	391.6	4699
10	.50	57.1	685	40	1.09	483.9	5807
12	.53	72.5	870	42	1.10	512.3	6147
14	.56	89.5	1074	48	1.25	665.2	7982
16	.60	107.8	1293	60	1.40	916.7	11000

Elsewhere we give a detailed description of many articles manufactured by us. We are also contractors for special machinery used in connection with Crushing Plants, Brick Plants, etc. We build Conveyors of any length and capacity. We are prepared to contract for complete power plants, including housing for same. Write us for description and prices on Steam Rock Drills, Saw Mills, Sprinklers, Tank Wagons and Street Sweepers.

General Warrantee

All machines manufactured by the Climax Road Machine Company are warranted to be made of good material and workmanship. We agree to replace, free of charge, f. o. b. factory, any parts which may break in regular and practical use by reason of defective material or workmanship, within a period of one year from the date of purchase.



with any desired width of roadway and sidewalks, as may be required. We desire to correspond with Highway Commissioners and Supervisors, Town or County Officials, where new bridges are proposed, or old ones are to be replaced, in order that we may submit proposals with plans and specifications. The services of our engineering department is cheerfully placed at the disposal of any such board, to give disinterested advice and furnish plans for any proposed work. Applications for estimates should state the number of spans in the proposed work, the length of such spans, width of roadway, number and width of sidewalks and the required carrying capacity of the structure.

A good bridge must, first of all, be well designed. We employ skilled engineers and give particular attention to the design of our work. The material used in construction must be of the best quality and we use none but the best grades. Our shop work is well performed and the erection is under the direction of practical men.

We supply Iron and Steel Piers and Abutments of different styles. In many places such foundations are more suitable, as well as cheaper than masonry. We furnish Pile Drivers and contract for the repair and erection of bridges which have been washed away.

We solicit notices of lettings of bridge work at which proposals will be received. Our facilities are at the disposal of the prospective purchaser, but no obligation need be felt to purchase from us unless our proposition be deemed most advantageous.

The Climax Reversible Horse Roller

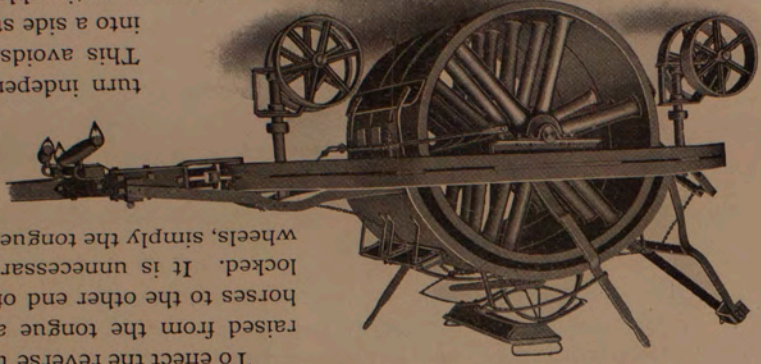
This roller, illustrated herewith, is a new invention embodying many points of superiority not found in other rollers.

The frame is steel angles riveted together and the front end rests on a two-wheel truck. In the front of the frame the pole rests and is firmly held in place by two clamps, each of which is operated by a lever from the driver's seat.

To effect the reverse the clamps or locks are raised from the tongue and it is drawn by the horses to the other end of the frame and again locked. It is unnecessary to move the truck wheels, simply the tongue, an advantage found in no other roller.

The rolls, three in number, are loose on the main shaft and turn independently of each other. This avoids friction when turning into a side street or going around a curve, so noticeable in rollers where the rolls are fastened to the shaft.

Doubtless the greatest advantage of the Climax Roller is the fact that the reverse and mechanism thereof is in the frame at the center of the roller. This does away with the top heaviness and removes from the driver's position all



The Climax Road Machine Is Warranted

- 1st. To be a strong, durable machine, simple in construction, and having few parts subject to wear.
- 2nd. To plow successfully any soil or road, other than solid rock, to be easily operated and reversed, capable of making a ditch with either steep or flat sides.
- 3rd. To have a practical replaceable point, sliding adjustment to blade without changing angle, and as direct draft as any machine on the market.
- 4th. To cost less for repairs than any other machine.

The Climax Stone Crusher Is Warranted

- 1st. To be a strong, practical machine, capable of doing the work for which it is intended.
- 2nd. To crush in regular and practical work, with jaws set to close to two inches, the amount set forth in the table below.
- 3rd. To have every part made to template so as to be interchangeable.

Sizes, Capacities, Etc., of Crushers	No. 1 $\frac{1}{2}$	No. 2	No. 2 $\frac{1}{2}$	No. 3	No. 4
Size of top opening of jaws in inches.....	8 x 15	9 x 16	10 x 20	10 $\frac{1}{2}$ x 22	12 x 28
Product per hour in tons when machine closes to 2 inches.....	10 to 15	12 to 18	15 to 25	15 to 30	25 to 40
Weight, approximate.....	5,000	7,000	9,250	15,500	27,000
Weight, mounted on 4 wheels, with 12-foot elevator.....	7,500	9,500	12,000	265	240
Speed, revolutions.....	275	32 x 9	275	38 x 10	44 x 12
Driving pulleys, diameter and face, inches.....	30 x 8	32 x 9	36 x 11	38 x 10	44 x 12
Horse power required.....	12	15	18	25	35
Floor space required, length.....	5 ft. 6 in.	6 ft. 6 in.	7 ft. 6 in.	7 ft.	8 ft. 6 in.
Floor space required, width.....	5 ft.	5 ft. 1 in.	5 ft. 9 in.	5 ft. 6 in.	6 ft. 6 in.
Extreme Height of Machine.....	3 ft. 5 $\frac{1}{2}$ in.	4 ft. 3 in.	5 ft. 2 $\frac{1}{2}$ in.	4 ft. 7 in.	5 ft. 7 in.
Size of Elevator best suited.....	No. 2	No. 2	No. 2 $\frac{1}{2}$	No. 3	No. 3
Diameter of Screen best suited in inches.....	30	30	36	36	42



Bridges

The designing, manufacture and erection of Bridges and Steel Structural Work, is a department of our business which has grown to great proportions. We have increased our facilities for turning out this work, and striking improvements have been made from year to year, in the style and detail of our bridges. Every member subjected to strain or vibration is carefully looked after and strengthened. Our capacity for quick construction and erection includes highway and traction line spans, up to and including 200 feet in length,



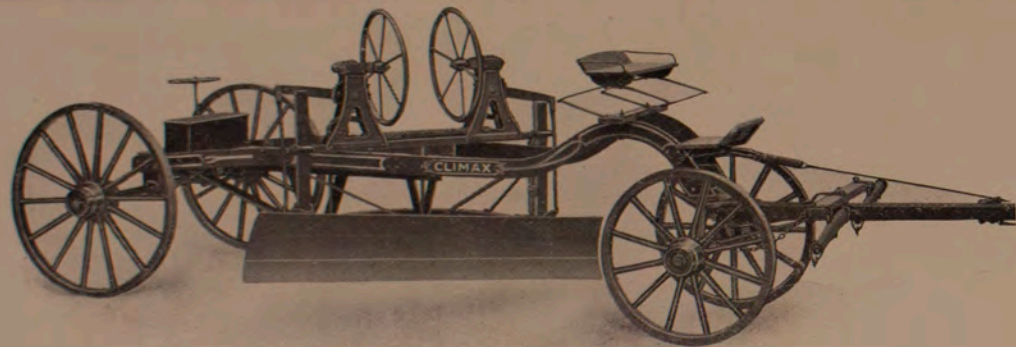


impediments to his control of the double brake operated by levers. By reason of the pole and whiffletrees only reversing in the frame, the roller can be reversed in a place so narrow that there is but room for the horses to walk alongside the roller. The frame projects but a few inches outside the rolls, thus allowing the roller to work close to a fence, curbing, trees or poles.

We build and carry in stock 3½, 4, 4½, 5, 5½ and 6 ton rollers, and build heavier ones to order. Diameter of Roller, 56 inches; width, 54 inches.

The Climax Reversible Road Machine

Our Steel Reversible Road Machine is made in two patterns, one of which has a concave blade and the other an angle blade. This machine or grader has been on the market for many years and has been thoroughly tested in every particular. No complaint as to its efficiency has ever been made. The



Climax Reversible Road Machine, with Concave Blade

machine at first glance commends itself to the observer, being symmetrical, well designed and of mechanical appearance. But its good qualities do not stop here. Strength and simplicity are the cardinal points of the Climax machine, while the lightness of draft, ease of operation, and perfect reverse, tend to make it a public favorite. The machine works perfectly at plowing, scraping and leveling, and we can confidently recommend it, with intelligent use, as the one builder of good dirt roads at a moderate cost.

Design

The Climax machine is low to the ground, avoiding the possibility of tipping over. The strain on the parts is applied in tension or compression, practically none of it transverse. The operator is stationed at the center of the machine with his work constantly in sight. The blade has the greatest range of adjustment of any machine and all the working parts are most easily and rapidly handled. The blade can be raised sixteen inches bodily, or twenty-five inches at the back end, making a perfect plowing angle.

Construction

Steel and iron are used exclusively in the construction of our machine with the exception of the wheels. These are furnished either of wood or steel. In



our wood wheels the best material is used and they are manufactured and finished with great care. The tires of either style of wheel are three inches wide.

All the parts are hot riveted, thus doing away with the constant annoyance from the use of bolts.

Blade

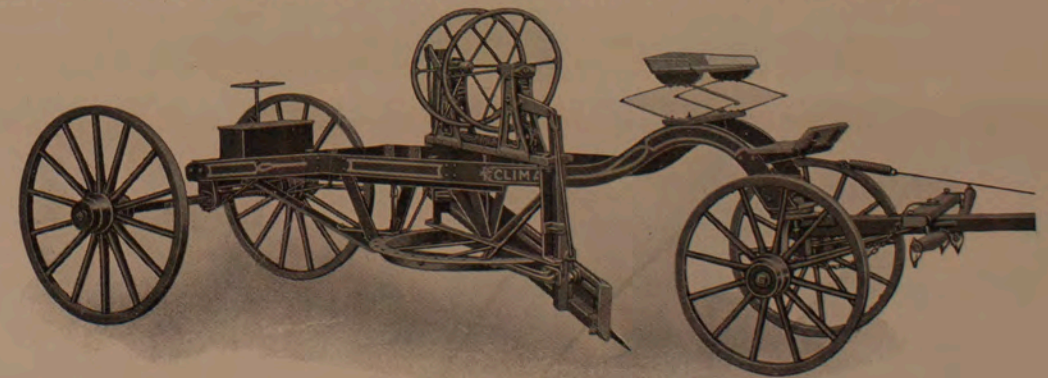
The blade is the most important working part of the machine. The Climax Blade is light, strong and durable. The back is well braced with angle steel, doing away with the possibility of bending; the ends are fitted with chilled shin pieces, while to the lower part are attached the points and cutting edge, manufactured from the best quality of tool steel, well ground and sharpened. This material insures them against wear, and their manner of attachment (by bolts) makes possible their easy removal for sharpening or replacing.

Concave Blade

In addition to the Blade above described, we are prepared to offer to the trade a Concave Blade which is well adapted to use in many localities. The manner of attachment and handling this blade is identical with that of the diamond point blade. In construction it is likewise well braced and attached to it is a cutting edge. We recommend the use of the concave blade in sections having a sandy soil, while for use in a hard, stony ground the diamond point blade is unequalled. The user, by having both styles of blades may change them on the same machine, at his pleasure, and use the one best adapted to his work.

Reverse

The reverse of the Climax machine is complete and simple in its operation. An angle bent in a semi-circular form is fastened back of the hangers and connected from end to end by a channel which is attached from the center by a strong pin device to the frame. In this circle are slots, at frequent intervals, allowing the blade to set at any angle. The reverse circle is well supported by strong braces to the side and rear of the machine frame, thus insuring perfect



Climax Reversible Road Machine, with Angle Blade.



rigidity. The reverse can be most easily handled by the operator using the hand-wheels to effect the reverse of the blade. These hand-wheels, in raising and lowering the blade, work from a worm gear attached to the hub shaft in a cog head block, and are perfect in operation.

Sliding Blade

The Sliding Blade is a notable feature of the Climax machine. This blade is hung on slot pins on the hangers and by means of this device can be moved two feet, from one side to the other, without changing the angle. The blade, by means of two lock nuts, can be set extended to any desired length, at one side, within this two feet range.

Draft

Direct draft will never be secured until the power is applied directly to the point of resistance. The draft of the Climax is as direct as that of any machine on the market and much lighter than that of many others, as a sharpened blade is used to penetrate the soil. None of the draft is on the kingbolt as is the case in many machines. On the contrary it is on an upward projecting boss which engages in a socket in the frame of the machine, thus placing the wear on a large surface.

Styles of Machine

The Climax has two separate and distinct styles of rear axle, thereby enabling us to furnish a machine best adapted to the different conditions of road building which exist in different localities.

In the laterally adjustable axle machine, the rear skeins are pivoted at the outer extremities of the axle, and united by an arm and connecting bar, so that the operator from his position on the machine has absolute control over the movement of the rear wheels. He can throw the rear end of his machine toward the road to pass a sluice or telegraph pole, crowd it toward the ditch to assist in cutting down a bank, aid in paring a shoulder, in fact make any change he desires. By means of this adjustment the angle can be changed with the blade loaded and the team in motion, a feature possessed by no other road machine. This device is patented by us, and used exclusively on the Climax.

The Long Axle Machine is so constructed that the operator may shift the frame of the machine from one end of the axle to the other without leaving his position. With one of these two machines we are able to perfectly meet road building conditions in every part of the country.

Repairs

The Climax has few wearing parts, which are, as before stated, easily and cheaply replaced. To insure a perfect fit, extras should in all cases be ordered direct from the factory or from our agencies.

Special Features

The Climax is absolutely the only machine on the market on which the blade can be raised and lowered without likewise lifting the reversing device. We are the inventors, patentees and sole users of the laterally adjustable rear



axle on road machines and on no other machine is the advantage of the sliding blade attained. The approximate weight of the Climax machine is 2,500 lbs.

New Improvement

We have recently fitted to our road machine a new and valuable improvement consisting of a counter balance spring which is so arranged that the entire weight of the blade hangs in balance at all points. This is a valuable improvement as the operator can now raise the blade as easily as it can be lowered.

Open Door Rotary Fine Crushers

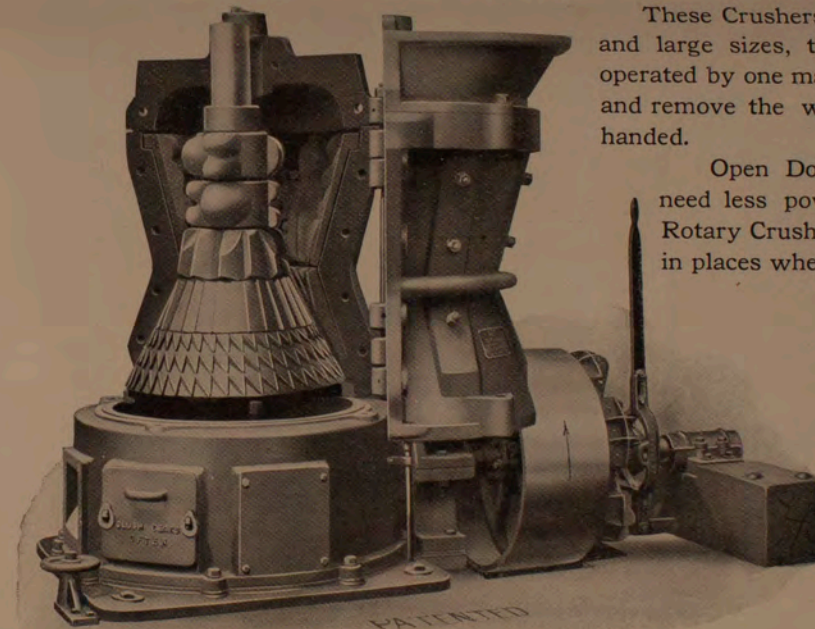
In sections where the crushing to be done calls for the reduction of material to an unusual degree of fineness, there is a demand for Rotary Crushers. On this page we give two illustrations of the best of such Crushers, the larger view showing doors partially open and the smaller view showing doors closed.

These Crushers are made in small and large sizes, the doors are easily operated by one man who is able to lift and remove the wearing plates single handed.

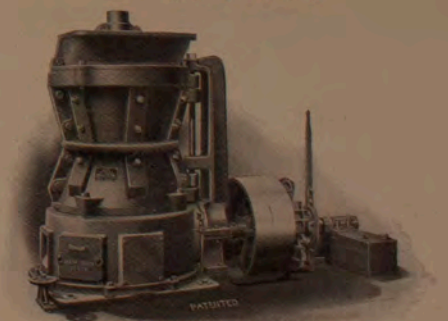
Open Door Rotary Crushers need less power than any other Rotary Crushers we have seen and in places where fine or coarse reduction of moderately hard materials is called for, they do the work rapidly and easily.

The frame is of cast iron, the shaft of steel and the best babbit metal bearings are used. The wearing pieces are of chilled cast iron.

These Rotary



Crushers have an adjusting wheel by means of which they may be regulated for fine or coarse work while running. We will cheerfully send full particulars regarding size adapted to your needs if you will communicate with us, stating the character of work to be performed and the capacity desired.





Rotary Fine Crushers

No.	Hopper Opening	Approx. Cap. T's per Hr.	Approx. Horse Power	Speed Rev.	Pully Dia. Face	Approx. Weight	Length	Width	Height
1	13 x 18 in	2 to 6	6 to 10	300	24 x 8	4000 lbs.	6 ft. 10 in	3 ft. 2 in	6 ft. 8 in
2	20 x 30 in	8 to 15	15 to 20	250	30 x 12	7500 lbs.	8 ft. 8 in.	3 ft. 10 in	6 ft. 10 in
3	26 x 35 in	10 to 25	25 to 30	250	36 x 16	20,000 lbs	9 ft. 0 in.	5 ft. 4 in.	9 ft. 1 in.

Sprinkling Wagons

Our line of these wagons is in keeping with all Climax products. We are prepared to furnish Sprinkling Wagons of any size on short notice and warrant that the grades we handle will compare favorably with any in the market.

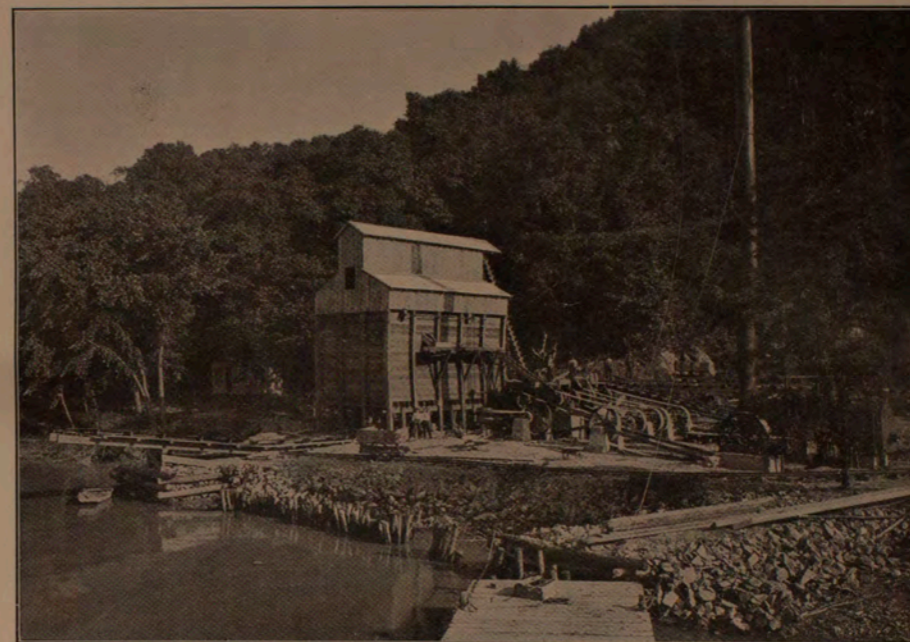


The sprinkler shown herewith is mounted on cut-under gear and is convenient, well built and serviceable. These wagons are built to last, having second growth hickory axles, boxed steel skeins and extra long necks, extending under the axle and almost meeting in the center.

The half-circle fifth wheel permits the wheels to cut under to the reach. These wagons are built in 5 sizes, the capacity of the various sizes being 350, 450, 600, 750 and 1000 gallons.



Some Climax Stationary Crushing Plants in Operation



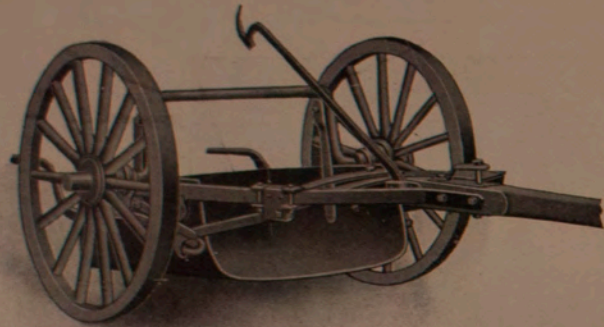
Herewith are shown two Mammoth Plants erected recently. The capacity of the Stationary Bins is self-evident and the number of the machines in operation have a capacity of many tons daily.


The lower view shows a plant where stone is hauled over the trestle from the hillside to the plant. No undertaking involving the hauling and crushing of stone is too big to admit of a Climax solution and recent installations of sand and stone plants for Municipality use proves that counties as well as individuals are awakening to the great possibilities of Crushing and Road Building Machinery as exemplified in Climax Plants.





Pressed Bowl Wheel Scraper



 In Position for Filling.

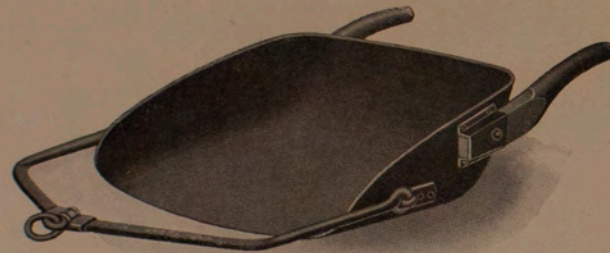
CAPACITY OF WHEEL SCRAPERS

No. 1	Square Bowl.....	10 cu. ft.
No. 2	Square Bowl.....	12 cu. ft.
No. 3	Square Bowl.....	16 cu. ft.
No. 1	Pressed Bowl.....	10 cu. ft.
No. 2	Pressed Bowl.....	13 cu. ft.
No. 3	Pressed Bowl.....	17 cu. ft.

Automatic front end gate attached,
if ordered, but charged extra.

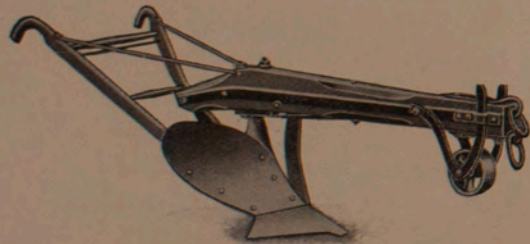
PRESSED STEEL DRAG SCRAPER

Furnished, when desired, with
solid steel runners or double bot-
tom plate. Made in three sizes, 3,
5 and 7 cubic feet capacity.



CONTRACTORS' OR GRADING PLOW

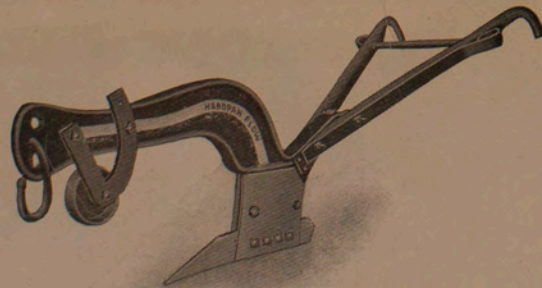
We carry these in all sizes and will
send a complete catalogue of such tools
on application.



HARDPAN OR ROOTER PLOW

A full line of these and all other dirt
plows.

Quantity prices on application.



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SYRACUSE, N.Y.